

Rajkumar Pujari

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EDUCATION	Purdue University , West Lafayette, Indiana, USA Ph.D. in Natural Language Processing, Department of Computer Science	Aug 2017–Present 3.80/4.0
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Indian Institute of Technology Kharagpur, West Bengal, India
B.Tech. (Hons.), Department of Computer Science and Engineering

PUBLICATIONS **LLM-Human Schema Pipeline for Cultural Context Grounding in Conversations**

Rajkumar Pujari and Dan Goldwasser

Under review in ACL ARR

“We Demand Justice!”: Towards Social Context Grounding of Political Texts

Rajkumar Pujari, Chengfei Wu and Dan Goldwasser

Accepted and withdrawn from Findings of EMNLP 2023; Committed to EMNLP 2024

Reinforcement Learning Guided Multi-Task Learning for Low-Resource Stereotype Detection

Raikumar Pujari, Erik Oveson, Priyanka Kulkarni and Elnaz Nouri

Poster at ACL 2022 main conference held at Dublin, Ireland from May 22–27

Understanding Politics via Contextualized Discourse Processing

Raikumar Pujari and Dan Goldwasser

Talk at EMNLP 2021 main conference, Punta Cana, Dominican Republic on November 6–12

Using Natural Language Relations between Answer Choices for Machine Comprehension

Rajkumar Pujari and Dan Goldwasser

Talk at NAACL-HLT 2019 main conference, Minneapolis, USA on June 2-7

Can Taxonomy help? Improving Semantic Question Matching using Question Taxonomy

Deepak Gupta, Raikumar Pujari, Asif Ekbal, Pushpak Bhattacharyya, Anutosh Maitra, Tom Jain and Shubhashis Sengupta

Poster at COLING 2018 main conference, Santa Fe, New Mexico, USA, August 20–24

A Novel Two-stage Framework for Extracting Opinionated Sentences from News Articles

Raikumar Puiari, Swara Desai, Nilov Ganguly and Pawan Goyal

Talk at Texgraphs-9 workshop at EMNLP 2014, Doha, Qatar, October 25–29

RESEARCH **Ph.D. Student, Purdue University** Aug 2017–Present

EXPERIENCE	<i>Contextualized Discourse Representations; Machine Comprehension; Social Norm Understanding (Pragmatics)</i> Prof. Dan Goldwasser
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Worked on investigating the usefulness of common sense knowledge and inferences in machine comprehension. Currently working on developing a distributed, interpretable representation for large political corpora and also, working on a DARPA CCU (Computational Cultural Understanding) project that leverages Large Language Models combined with symbolic models to extract social norms and their violations from conversations.

Project Research Assistant, CFILT, IIT Bombay Jan 2016–May 2017

Semantic Question matching using a taxonomy and DL representations

Prof. Pushpak Bhattacharyya

Developed a restricted-domain QA system for Accenture labs, Bangalore. Was primarily focused on developing a hierarchical taxonomy and subsequent classification algorithms used for semantic question matching.

Bachelor Thesis Project, IIT Kharagpur

Jul 2013–May 2014

Extracting opinionated sentences from news articles

Prof. Niloy Ganguly

Developed a novel two-stage framework to extract opinion-bearing sentences from news articles. The framework is a pipeline of sentiment classifier and a graph-based algorithm analogous to HITS in collaboration with Yahoo!.

RELEVANT	JEM Intern, Microsoft Research, Redmond	May 2021–Aug 2021
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INTERNSHIPS	<p><i>RL-guided Multitask model for Stereotype Detection in Text</i> Elnaz Nouri, Erik Oveson and Priyanka Kulkarni</p> <p>Worked on Reinforcement Learning guided Multitask Learning Model for <i>Stereotype Detection</i>. Leveraged several toxicity datasets such as <i>Hate-Speech</i>, <i>Misogyny & Offensive Language</i> to systematically improve performance on the task of <i>Stereotype Detection</i>. Built a <i>Stereotype Detection</i> dataset using Amazon Mechanical Turk.</p>
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Applied Scientist Intern, Amazon Alexa Conversational Search Team

May 2019–Aug 2019

Conversational Question Answering in Sports Domain

Kevin Small

Developed a new conversational QA dataset for sports domain. Built a ParlAI-style data collection tool and collected the dataset using Amazon MTurk. Also designed a generative neural architecture for the task.

	Summer Internship, Yahoo! Bangalore, India <i>Relevance ranking of comments on news articles</i> Designed and implemented a comment ranking algorithm that scores comments based on the relevance of the comment text to the article and its Yahoo classification category (YCT).	May 2013–Jul 2013 Ms.Swara Desai
POSITIONS OF RESPONSIBILITY	Program Committee Member - Reviewer; *Outstanding Reviewer ACL ARR since Nov 2021, ACL 2023, IJCAI 2023, AAAI 2023, EMNLP 2023, EMNLP 2022, NAACL 2022, COLING 2022, ACL 2022, AAAI 2022, ACL-IJCNLP 2021*, EMNLP 2021, NAACL-HLT 2021, AAAI 2021, EMNLP 2020, COLING 2020, IJCAI 2020, AAAI 2020, NAACL-HLT 2019, EMNLP-IJCNLP 2019, TALLIP	
	Graduate Teaching Assistant Data Mining and Machine Learning, Web Information Search and management, Data structures and algorithms, and Operating Systems undergraduate courses.	Jul 2017–Present
	President, Purdue University Cricket Club Organized cricket tournaments for 250 players, raised funds, and managed an annual budget of USD \$7000.	May 2019–Jun 2021
WORK EXPERIENCE	Senior Quantitative Researcher WorldQuant Research, India Was responsible for researching financial and mathematical literature, understanding various datasets to identify sources of market inefficiencies and convert them to predictive profitable models called <i>alphas</i> . The objective was to identify and construct signals and make robust models from them with high Sharpe ratios (returns/risk) and significant abnormal returns. Concentrated mainly on seeking low turnover quality <i>alphas</i> for trading in the equity market which are used in developing algorithmic daily re-balancing long-short trading strategies on US, Europe, Asian, and other markets	Jul 2014–Dec 2015
NOTABLE ACHIEVEMENTS	Was promoted to Senior Quantitative Researcher after 1 st year at Worldquant Research for exceptional performance Secured a Department Change from Electrical Engineering department to Computer Science and Engineering department at the end of first year based on academic merit Secured 840 th rank amongst more than 450,000 students (99.81 percentile) in IIT-JEE 2010 and 939 th rank amongst more than 1,000,000 students (99.91 percentile) in AIEEE 2010 Qualified among Center Top 10% in National Standard Examination in Physics and National Standard Examination in Chemistry conducted by Indian Association of Physics Teachers (IAPT) in Class XII standard.	
KEY COURSES	Graduate Level: Advanced Topics In Reasoning with LLMs (A+), ML Methods for NLP, Statistical ML (A+), Deep Learning, Numerical Methods for Optimization, Algorithm Design and Analysis, Operating Systems Data Mining: Information Retrieval, Machine Learning, Speech and Natural Language Processing Electives: Advanced Graph Theory, Artificial Intelligence, Computational Number Theory, Database Management and Systems, Distributed Systems, Formal Systems, Foundations of Cryptography	
KEY PROJECTS	Summer Project, IIT Kharagpur <i>Tracking soccer players in a video</i> Worked on various color segmentation algorithms and implemented a tracking algorithm based on position prediction in successive frames using MATLAB Image Processing Toolkit	May 2012–Jun 2012 Prof.Partha Pratim Das
EXTRA-CURRICULAR ACTIVITIES	Represented Purdue University Cricket Club in Midwest Cricket Conference 2018, Midwest Cricket Tournament 2019 & 2021. Served as a Senior Writing Team Member of Entrepreneurship Cell IIT Kharagpur in the academic year 2011–2012 Served as a National Service Scheme (NSS) volunteer for 1 year in the Education Improvement Group and a National Cadet Corps (NCC) cadet for 6 years and was awarded NCC-A & B certificates Part of a 6-member team that qualified for the finals of the NIGHTSHIFT event in Kshitij 2012, the annual techno-management fest of IIT Kharagpur	
REFERENCES	Prof. Dan Goldwasser, Purdue University Kevin Small, Amazon.com Elnaz Nouri, Microsoft Research	email: dgoldwas@purdue.edu email: smakevin@amazon.com email: elnaz.nouri@microsoft.com